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FOREIGN NEWS ON APPLES

APPLE PRODUCTION IN ENGLAND

The introduction of apple growing in England is of uncertain date, but it is probable that a few apple trees were grown by the Romans prior to 300 A.D. It is also thought that the Normans brought in many varieties from France during their regime in England dating from 1066 A.D. It is stated that by 1650 there were as many as 200 varieties in one locality.

Apple growing during this time, has had its periods of expansion and of decadence. Extended continental wars would cause a dearth of wine in England, with a resultant great demand for cider that could be produced at home, and thereby added great impetus to orchard culture. Conflicts during the 16th and 17th centuries so snut England off from the wine supply that it was considered a patriotic duty to grow apples for cider and the Golden Age for orchard culture followed during the 17th century. During the 18th century, general agriculture flourished and the attention of farmers was swung away from the care of their orchards with the result that decadence set in and lasted for a long time. The next impetus to orchard culture came in comparatively recent times from the demand for market fruit.

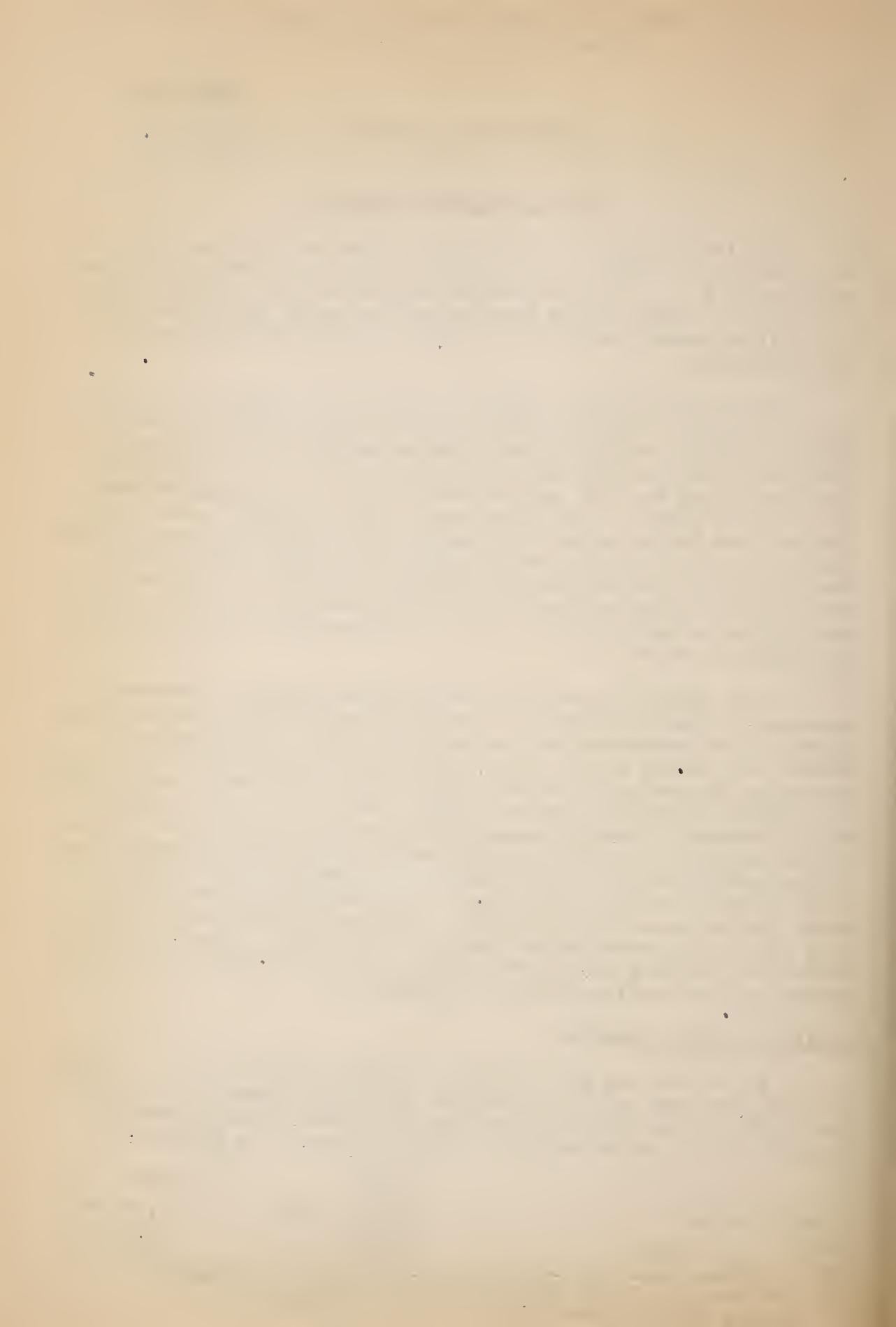
While England's isolation caused orchard practice to receive attention in the 17th century, in the 19th and 20th century it has been a case of easy communication reviving the industry. Not only have markets been opened up but easy transportation from Canada and the United States has brought in an outside supply of high grade market apples which have spurred on English growers to take better care of their orchards. This development of rapid transportation outside of England, as well as within the country, more over, has changed profitable apple growing from a cider basis to that of market apples. Wellington ^{1/} asserts that the rapid extension in England of market apple growing as against cider apple growing dates from about 1890, while apple culture for market is said not to have grown into an industry of first rate importance until 1910. Prior to that time market apples were largely grown for the city markets in the immediate vicinity of production.

Apple Districts in England.

In 1919 England had 147,401 acres ^{1/} of apple orchards as compared with 171,234 acres in 1910, a decrease of 13.9 per cent. This acreage is largely in three general districts, Kent, East Anglia and the West of England. The apple acreage in these districts is as follows: ^{1/}

	<u>1910</u>	<u>1919</u>
West of England	105,930 acres	80,491 acres
Kent	13,358 "	20,487 "
East Anglia	10,568 "	13,911 "

^{1/} Estimates of acreage and production are taken from "Economics of Apple Growing in the British Isles" by Capt. R. Wellington.



Of these districts Kent is by far the most important for growing market apples; East Anglia with its orchards in Cambridge, Norfolk, Suffolk, Hunts, Essex, and Lincolnshire comes next; while the West of England, with the largest total acreage, is least important from a market aspect, the numerous orchards of Worcestershire, Devon, Somerset, Hereford, Monmouth, and Gloucester having been planted and kept principally for the production of cider. Unquestionably there has been a heavy decrease in apple acreage in the counties producing cider while the districts producing market fruit have shown a steady increase in acreage and production.

It is estimated that a normal British production of market apples would amount to 4,753,600 cwts.^{1/} or about 9,500,000 bushels. Estimating from an acreage basis, a normal crop of cider apples would exceed the volume of market apples.

Orchard Practices.

In discussing present methods of culture, reference will be made to observations in Kent where orchards were visited by the writer in the neighborhood of Canterbury, Faversham, Maidstone and Paddock Wood Road.

With very few exceptions, land used for apple orchards is expected to produce an additional crop. Plantings are made with this in view. Either standard stocks with quite wide spacing so that trees may be trained to very high heads - high enough to allow the land to be laid down in sod and pastured with sheep or hogs - or dwarf or semi-dwarf stocks, are used. In the latter case the trees are planted fairly close together in the rows and the rows spaced far enough apart for plantings of gooseberries or currants between them. Until the standard stocks have developed large heads it often happens that small fruits are planted between the trees during the period that the young trees are to receive cultivation.

Climatic conditions seem to be responsible for this dual culture, as the moist climate makes it possible to have sod culture without the effects of dry weather becoming too pronounced. The fertilizing benefit of running live stock in the orchards also seems desirable to many. Sod is preferred with some varieties on account of earlier ripening. A general farmer does not entirely lose the use of his land during a year of crop failure if he is able to run a flock of sheep or herd of hogs in his orchard. Frequent failures of the apple crop due to cold wet springs no doubt have a great influence toward making two uses of the land desirable where a farmer is raising fruits entirely. If it is possible to secure a good crop of black currants or gooseberries during a year when there are no apples a farmer who holds strictly to fruit may be weathered over financial difficulties.

The growing of apples on dwarf or semi-dwarf trees is practiced more in England than in any other country observed. The object is to have trees come into bearing early, and by close planting to utilize the row system of planting. Plantings in Kent are mostly on clay or clay loam soils; sites on the hillsides of the rolling country being preferred.

^{1/} Estimates of acreage and production are taken from "Economics of Apple Growing in the British Isles" by Capt. R. Wellington.

Among the principal varieties grown for market are the Gladstone, Beauty of Bath, Worcester Pearmain, Cox's Orange Pippin, Newton Wonder, Lane's Prince Albert, Lord Derby, Blenheim Orange Pippin, Bismarck, Miller's Seedling, and Bramley's Seedling.

The principal pests to be fought are apple weevil, apple capsid, red spider, aphids and apple scab. It is stated that the growing of clean fruit requires at least five sprayings, with a dormant winter spray once in two or three years. Very few growers, however, even in the best sections, spray this number of times, and probably three sprayings per year would be what the average grower in Kent would do. Red spider is at the present time giving a great deal of trouble, while capsid and scab must be fought if unblemished apples are to be grown. Every kind of equipment, from knap-sack sprayers to stationary plants with pipe lines, is made use of.

Preparing for Market.

Harvesting begins in July. In some orchards it is customary to thin out the earlier varieties, marketing the small green apples for culinary purposes, and leaving the balance of the crop on the trees to attain size and color. With very few exceptions, this is the only thinning that is practiced in English orchards. The major part of the harvesting takes place the latter part of August and in September.

Grading is customarily done in the orchards, though many orchardists do not make well-defined grades, - only going so far as to sort out the badly deformed and blemished fruit. Most of the apples are marketed in bushel baskets, - a package known as the bushel sieve. These are cylindrical in shape, of wicker weave, 17 inches in diameter, 9 inches deep at the center, and $10\frac{1}{2}$ inches deep at the outside. The baskets are distributed beneath the trees for picking and are assembled at one point in the orchard for sorting and packing.

Packing consists of placing a small amount of hay in the bottom of the basket, lining with three or four thicknesses of tissue paper, usually light blue in color, and then filling, finishing off by ringing the top layer with a crown of one inch. Tissue paper is then placed over the fruit and on top of this a pad of hay or wood wool which is held in place by inserting flat split pointed hazel wands into the sides of the baskets. Apples are also marketed in half bushel sieves and open-headed half-barrels.

Refrigeration has in the past been made very little use of in connection with the marketing of English apples, but a start has been made by a few growers in connection with storage. Little attention has been given, however, to the provision of first class storage of any kind. At present the horticultural research station at Cambridge University is making extensive investigations as to the use of refrigeration in connection with English apples. It appears that many varieties of apples grown in England are subject to browning about the core when stored at temperatures as low as are best for American apples. This, together with the fact that few English varieties are

suitable for long keeping, makes progress in the commercial cold storage of apples very slow.

Growers who produce good clean apples and who have introduced modern cold storage practice, however, have been very successful. It seems certain that the profits made by these progressive growers will induce others to take up the practice, so that we can look for an increasing use of refrigeration.

The winter holding of English apples will relate more to culinary than to dessert fruit. The choice dessert varieties such as Beauty of Bath, Cox's Orange Pippin and Worcester Pearmain are of early maturity and suitable only for short storage, whereas one of the best storage varieties is the Bramley's Seedling, which can only be regarded as a cooking apple.

Methods of Marketing.

Organized methods of marketing English apples are not in evidence. The proximity of orchards to markets resulted in the early development of the practice of farmers' carting in to the city markets and there selling their own fruit. The evolution of this was for growers to send their apples in to the city market to be sold by established salesmen. During recent times growers are not restricting themselves to nearby markets but are consigning their shipments to salesmen in cities in all parts of the kingdom.

The very closeness of the English growers to their markets has been one of the greatest handicaps to the rapid development of certain phases of their industry. Had they had longer distances to ship better packing would have been employed. Had they had higher transportation charges there is no doubt that much of the cheaper fruit would have been placed in the cull pile, and the yearly view of this vast waste unquestionably would have caused added vigilance in the orchard to reduce the proportion of inferior fruit. A realization of these facts is being felt in England at this late date and is having a beneficial effect upon the standards of production.

One factor that has retarded the utilization of suitable storage facilities and has held back the improvement of production and of grading and packing standards, has been the "returnable package." By this is meant the use of baskets owned by the city salesman who sends them out to the grower for filling and re-collects them from the retailer after the fruit has been sold to the consumer. These baskets are used year after year in this manner, their ownership always remaining with the commission merchant. The use of these baskets makes it easy for the farmer to carry on his harvesting and marketing operations and does not require him to give this side of his work close thought. A few weeks and all is over till another season, with no necessity of thinking about improving his packing and storing facilities, to the end of extending his range of markets as well as the length of his marketing season.

Future Effect of English Competition.

There are many inducements to increase orchard acreage in England when it is considered that for transportation and packing the growers of Kent are relieved of the equivalent of about \$2.00 per barrel expense that our eastern growers face in reaching overseas markets, and of about \$1.60 per box that is taxed against western boxed apples. English package and packing costs are only a fraction of those on American apples prepared for export and, since home grown apples do not face heavy port charges, the marketing cost differential goes beyond the item of transportation. That English farmers to some extent recognize this advantage is indicated by the fact that for every two acres of apples in Kent in 1910 an additional acre was planted by 1919. Interest in apples has not ceased since that date. Many growers are making good profits through using up-to-date methods. Gradually this fact is being recognized by other farmers and we may expect them to follow the example of their progressive neighbors.

During the calendar years of 1923 and 1924 Great Britain imported from the United States the equivalent of 2,286,825 and 2,838,647 barrels of apples, respectively, and from Canada 1,446,356 and 1,417,654 barrels. Had England been growing this quantity of apples and had her orchards been able to produce five tons per acre, the country would have required from 48,000 to 55,000 additional acres of commercial bearing orchards.

How far can plantings in England increase without diminishing imports? Should her orchardists increase their trees to cover 50,000 or 60,000 additional acres would our fruit be largely kept out of the United Kingdom? At the present time English orchardists are without satisfactory dessert varieties. The Cox's Orange Pippin enjoys more popularity and is in greater demand than any American variety. Yet as a cropper it is not satisfactory and is not being heavily planted. The Worcester Pearmain is classed as a dessert apple and has color, but its quality is not as high as is to be desired and it is a difficult variety to keep clean from scab. Most of the other dessert varieties are very early in season and are almost all used up before our apples come upon the market.

Recent plantings have run heavily to varieties that have keeping qualities. These are best suited to culinary purposes. Chief among these varieties is the Bramley's Seedling. The utilization of cold storage in connection with these varieties is certain to replace many low quality apples, now coming from the United States and Canada, during the winter months of those seasons when English orchards bear well. Orchards in Nova Scotia, Ontario, New England and New York will feel this most heavily. As a matter of fact, with the use of cold storage by English growers only in its infancy, the influence of this production was heavily felt during the winter of 1925-26. Prices of American and Canadian apples that fall in the same category as English apples brought low prices all during the winter.

Irregularity in production of English orchards is one factor that will tend to save low quality American apples from being totally eclipsed in British markets. Cold, wet springs periodically cause English crop failures. This of course has a reactionary effect upon the

standards of English fruit growing since it requires regular crops to maintain high standards in production, and organization in marketing.

It appears to the writer that with probable fuller utilization of the English crop in the future, we may expect our annual exports to Great Britain to be more erratic from one season to another, than they have been in the past, that is, varying more closely with the size of the English crop. This fluctuation in British demand will chiefly affect the growers in New England and New York. Growers in Virginia, West Virginia, Maryland, Pennsylvania, Washington, Oregon, Idaho and California will not be hit as heavily. The effect upon the boxed apple states probably will be mostly of a secondary nature. Any pronounced fluctuation in our total exports will, of course, be reflected in our American markets because, as experience has demonstrated, "an apple is an apple" as long as it remains to crowd the market.

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